IN THE CLAIMS:

1.-17. (Cancelled)

18.   (New) A method of starting-up a router connected to a plurality of sub-networks in a home bus system comprising a router, a sub-network, an another router including a parent router for assigning a sub-network identification code that identifies each of the sub-networks, the method comprising:

carrying out a request for the sub-network identification code that identifies each of sub-networks connected to the router;

receiving a response based on the request;

determining from the response that another router is absent in each of the sub-networks connected to the router; and

stopping a routing function based on said determining.

19.   (New) The method according to Claim 18, wherein said carrying out the request comprises using a provisional sub-network identification code.

20.   (New) The method according to Claim 19, wherein the provisional network identification code comprises a value of 0x00.

21.   (New) A router connected to a plurality of the sub-networks in a home bus system having a router, a sub-network, and another router including a parent router for assigning a sub-network identification code that identifies each of the sub-networks, the router comprising:

a transmitting means for carrying out a request for the sub-network identification code that identifies each of the sub-networks;

a means for receiving a response based on the request;

a means for determining from the received response that an another router is absent in each of the sub-networks connected to the router; and

a means for stopping a routing function based on information provided by said means for determining.

22. (New) The router according to Claim 21, further comprising a means for storing a provisional sub-network identification code; and

the transmitting means is for carrying out the request by using the provisional sub-network identification code.

23. (New) A method for starting a router connected to a plurality of sub-networks in a home bus system comprising a router, a sub-network and another router including a parent router for assigning a sub-network identification code that identifies each of the sub-networks, the method comprising:

carrying out a request for the sub-network identification code that identifies each of sub-networks connected to the router;

receiving a response providing the sub-network identification code based on the request; and

stopping a routing function when the response is absent from each of the sub-networks connected to the router.

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24. (New) The method according to Claim 23, wherein said carrying out the request comprises using a provisional sub-network identification code.

25. (New) The method according to Claim 24, wherein the provisional network identification code comprises a value of 0x00.

26. (New) A router connected to a plurality of sub-networks in a home bus system comprising a router, a sub-network, and another router including a parent router for assigning a sub-network identification code that identifies each of the sub-networks, the router comprising:

a transmitting means for carrying out a request for the sub-network identification code that identifies each of the sub-networks connected to the router;

a means for receiving a response based on the request; and

a means for stopping a routing function when the response of the sub-network identification code is absent from each of the sub-networks connected to the router.

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27.   (New) The router according to Claim 26, wherein:

the router further comprises a means for storing a provisional sub-network identification code; and

transmitting means for carrying out the request by using the provisional sub-network identification code.

28.   (New) A method for starting a router connected to a plurality of sub-networks, comprising:

carrying out a request for a sub-network identification code that identifies each of the sub-networks connected to the router;

receiving a response based on the request;

determining from the response that another router is present in each of the sub-networks connected to the router; and

stopping a routing function based on the response.

29.   (New) The method according to Claim 28, wherein said carrying out the request comprises using a provisional sub-network identification code.

30.   (New) The method according to Claim 29, wherein the provisional network identification code comprises a value of 0x00.

31.   (New) A router connected to a plurality of sub-networks, comprising:

a transmitting means for carrying out a request for a sub-network identification code that identifies each of the sub-networks connected to the router;

a means for receiving a response based on the request;

a means for determining from the received response that another router is present in each of the sub-networks connected to the router; and

a means for stopping a routing function based on information provided by said means for determining.

32. (New) The router according to Claim 31, further comprises a means for storing a provisional sub-network identification code; and

transmitting means for carrying out the request by using the provisional sub-network identification code.

33. (New) A method for routing a router connected to a plurality of sub-networks, comprising:

carrying out a request for a sub-network identification code that identifies each of sub-networks connected to the router by using a provisional sub-network identification code;

receiving a response based on the request, the response comprising the sub-network code from each of the sub-networks connected to the router; and

stopping a routing function based on said response.

34.   (New)   A   router   connected   to   a   plurality   of   sub-networks, comprising:

a   means   for   storing   a   provisional   sub-network identification code;

a means for requesting a sub-network identification code that identifies each of the sub-networks connected to the router by using the provisional sub-network identification code;

a means for receiving the sub-network identification code as a response based on a request of the requesting means;

a   communication   processing   means   for   transmitting   and receiving data among the sub-networks; and

a means for stopping the communication processing means when   the   requesting   means   receives   the   sub-network identification code from each of the sub-networks.